

A Scalable MOS Field Effect Transistor

ABSTRACT OF THE INVENTION

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5 A field effect transistor and method for making is described incorporating self aligned source and drain contacts with Schottky metal-to-semiconductor junction and a T-shaped gate or incorporating highly doped semiconductor material for the source and drain contacts different from the channel material to provide etch selectivity and a T-shaped gate or incorporating a metal for the source and drain contacts and the oxide of the metal for the gate dielectric which is self aligned. The invention overcomes the problem of self-aligned high resistance source/drain contacts and a high resistance gate electrode for submicron FET devices which increase as devices are scaled to smaller dimensions.

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